

PROJECT STAKEHOLDERS

- North Canterbury Transport Infrastructure Recovery (NCTIR)
- Contractor: RST Environmental

CHALLENGES

- Multiple agencies working in narrow corridors
- Scarce topsoil
- Steep slopes
- 711 mm (28 in) of rain between June and October 2017

APPLICATION

- 17 tonnes (37,000 lb) of seed
- 100 bales of ProGanics® BSM™
- 700 bales of Flexterra® HP-FGM®
- 1600 bales of Conwed Fibers® Hydro Mulch® 1000
- Helicopter application of polymer on higher areas of the slope

RESULTS

- The roadside berms and slopes established vegetation within a few months
- Despite heavy rainfall from a tropical storm, the reclaimed sections withstood the intense storms



*Top: Immediately after the earthquake
Bottom: Vegetation fully established
on hydroseeded portion of slope 2 months
after application*

In November 2016, a 7.8 magnitude earthquake hit New Zealand near the tourist town of Kaikoura. More than 85 landslides damaged 194 kilometers (120 mi) of road and 150 kilometers (93 mi) of rail. The government immediately created the North Canterbury Transport Infrastructure Recovery (NCTIR) team and began planning how to restore access to state highways and railways. While NCTIR worked to quickly remove debris from the roads and rails, Profile® and PGG Wrightson Turf met with project consultants to determine how to stabilize the rocky slopes and prevent future landslides. Profile hosted a Lunch & Learn with the environmental recovery team and demonstrated the value of ProGanics® Biotic Soil Media™ (BSM™) and Flexterra® High Performance-Flexible Growth Medium® (HP-FGM®) for this site. ProGanics is an Engineered Soil Media™ (ESM™) that provides organic matter and soil-building components to modify the soil chemistry and initiate growth and sustain vegetation. Flexterra is the industry's leading hydraulically-applied erosion control product, which prevented erosion until vegetation was established.

Using The 5 Fundamentals™ for sustainable vegetation and reclamation, the team began developing a solution that focused on improving soil health, establishing vegetation and preventing erosion. With a deadline to get roads and rails up and running by December 2017, engineers developed a plan to quickly apply ProGanics and Flexterra while working with the complicated construction schedule. The contractor applied Flexterra to the bottom quarter of the slope, and then used a helicopter with a modified monsoon bucket to apply a glue-like substance with seed on the higher areas. After application, roadside berms were well-irrigated, and vegetation was fully established within two months. Even in the toughest terrain, sustainable vegetation stabilized the steep slopes. In February 2018, Tropical Cyclone Gita dropped more than 305 millimeters (12 in) of rain on the site. The reclaimed sections withstood the intense storms.

[Click here](#) for a video detailing the project from NCTIR.



Applying Flexterra to the steep slopes



*Flexterra application along the
road and railways*